



ANNUAL **WATER** QUALITY REPORT

Water testing performed in 2003



PWS ID#: AZ0007094

Continuing Our Commitment To Water Quality

The City of Goodyear is once again proud to present its annual water quality report. This edition covers all testing completed from January 1 through December 31, 2003. Over the years, we have dedicated ourselves to producing and providing quality drinking water that meets or exceeds all regulatory requirements. We are pleased to inform you that our compliance with all state and federal drinking water regulations continues to remain exemplary. We are continually striving to adopt new and innovative improvement methods for delivering the best quality drinking water to your tap in the most cost effective manner. As new challenges arise, we will continue to remain vigilant in meeting the challenges of providing quality drinking water at an affordable price, source water protection, water conservation, and community education while continuing to serve the needs of all the customers of the City of Goodyear.

For more information about this report, or for any questions relating to your drinking water, please contact Ruben Veloz or Arnold Coronado at (623) 932-3010.

The City of Goodyear has adopted a Stormwater Management Program to protect our groundwater from illicit discharges and stormwater runoff pollution. To learn more about the City of Goodyear's efforts of protecting our most valuable resource, a copy of the plan is available for review at the City Clerk's Office.

Community Participation

You are invited to participate in each City Council meeting and voice your opinions or concerns about your drinking water. The City Council meets on the second and fourth Monday of each month at 986 S. Litchfield Road. You may contact the City Clerk's office at (623) 882-7830 for further information.

How Is My Water Treated And Delivered?

The treatment and delivery process consists of a series of steps. First, groundwater is drawn from our water source and sent to a sand separator to remove suspended particles. Second, the water is chlorinated for the purpose of disinfection. Chlorine is added as a precaution against any bacteria that may be present. The final result of this treatment is clean, safe drinking water delivered through the city's distribution system to your home or office.



Where Does My Water Come From?

The City of Goodyear's drinking water source is supplied 100% by groundwater. The city has production wells, storage facilities, and pressure booster stations. The underground aquifer from which the city receives its water is called the West Salt Valley Sub-Basin. The aquifer's depth ranges from 100 to 1,000 feet from the surface. With nine well sites (five of which include storage tanks) and six booster stations, the City of Goodyear's operating system has a storage capacity of 9.12 million gallons. To learn more about our watershed on the Internet, go to the U.S. EPA's Surf Your Watershed at www.epa.gov/surf.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

MCL Violation for Total Coliforms

The Litchfield Park Service Company (LPSCO), a privately owned and operated company (water system # 07-046), had two total coliform bacteria monitoring violations in the months of September and December 2003. LPSCO performed the necessary corrective actions to comply with the Safe Drinking Water Act requirements immediately thereafter. Although the City of Goodyear purchased water from LPSCO during the time of the above-mentioned incidents, these violations did not affect the municipal water supply. The City of Goodyear Municipal Water System provides continuous disinfection to its water supply, resulting in total compliance for 2003. During the calendar year of 2003, the City of Goodyear collected 240 samples for total coliform bacteria and fecal bacteria. All of the samples were analyzed by an independent state-certified laboratory and in all cases the water sources tested absent (clean) for bacteria. For further information concerning these incidents, please contact the Litchfield Park Service Company at (623) 935-9367.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

What Substances Can Be Found in Drinking Water?

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it can acquire naturally occurring minerals, in some cases, radioactive material; and can pick up substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Water Quality Sampling Results

During the past year, the City of Goodyear conducted over 4500 water quality analyses in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. Although all of the substances listed here are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES									
City of Goodyear				Litchfield Park					
SUBSTANCE (UNITS)	YEAR SAMPLED	MCL	MCLG	AMOUNT DETECTED	RANGE (LOW-HIGH)	AMOUNT DETECTED	RANGE (LOW-HIGH)	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2003	10 ¹	0 ¹	22	10-22	0.47	0.1-0.47	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Beta/Photon Emitters (pCi/L)	2003	50 ²	0	NA	NA	4.8	2.1-4.8	No	Decay of natural and man-made deposits
Combined Radium (pCi/L)	2003	5	0	NA	NA	0.4	0.1-0.4	No	Erosion of natural deposits
Ethylbenzene (ppb)	2003	700	700	17	13-17	NA	NA	No	Discharge from petroleum refineries
Fluoride (ppm)	2003	4	4	1.8	0.7-1.8	1.3	1-1.3	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (ppm) ³	2003	10	10	8.8	1.4-8.8	6.4	2.5-6.4	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2003	80	NA	11	0.5-11	12	0.5-12	No	By-product of drinking water disinfection
Total Coliforms (# of positive samples)	2003	1 positive sample	0	ND	NA	2	NA	No	Naturally present in the environment
Trichloroethylene (ppb)	2003	5	0	1.0	0.6-1	NA	NA	No	Discharge from metal degreasing sites and other factories
Xylenes (ppm)	2003	10	10	0.92	0.46-0.92	NA	NA	No	Discharge from petroleum factories; Discharge from chemical factories

Tap water samples were collected for lead and copper analyses from 30 homes throughout the service area

SUBSTANCE (UNITS)	YEAR SAMPLED	ACTION LEVEL	MCLG	AMOUNT DETECTED (90 th %TILE)	HOMES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2001	1.3	1.3	0.16	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2001	15	0	2	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

UNREGULATED SUBSTANCES (City of Goodyear)									
SUBSTANCE (UNITS)	YEAR SAMPLED		AMOUNT DETECTED		RANGE (LOW-HIGH)		TYPICAL SOURCE		
Bromoform (ppm)	2003		0.86		0.10-0.86		By-product of drinking water disinfection		

¹These arsenic values are effective January 23, 2006. Until then, the MCL is 50 ppb and there is no MCLG. While your drinking water meets the U.S. EPA's standard for arsenic, it does contain low levels of arsenic. The U.S. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

²The MCL for beta/photon emitters is written as 4 mrem/year. The U.S. EPA considers 50 pCi/L as the level of concern for beta emitters.

³Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should seek advice from your health care provider.



Table Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

NA: Not applicable

ND: Not detected

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

New Arsenic Regulation

Arsenic contamination of drinking water sources may result from either natural or human activities. Volcanic activity, erosion of rocks and minerals, and forest fires are natural sources that can release arsenic into the environment. Although about 90% of the arsenic used by industry is for wood preservative purposes, it is also used in paints, drugs, dyes, soaps, metals, and semiconductors. Agricultural applications, mining, and smelting also contribute to arsenic releases. Arsenic is usually found in the environment combined with other elements such as oxygen, chlorine, and sulfur (inorganic arsenic); or combined with carbon and hydrogen (organic arsenic). Organic forms are usually less harmful than inorganic forms.

Low levels of arsenic are naturally present in water—about 2 parts arsenic per billion parts of water (ppb). Thus, you normally take in small amounts of arsenic in the water you drink. Some areas of the country have unusually high natural levels of arsenic in rock, which can lead to unusually high levels of arsenic in water.

In January 2001, the U.S. EPA lowered the arsenic Maximum Contaminant Level (MCL) from 50 to 10 ppb in response to new and compelling research linking high arsenic levels in drinking water with certain forms of cancer. All water utilities are required to implement this new MCL starting in 2006.

Removing arsenic from drinking water is a costly procedure but well worth the expenditure considering the health benefits. For a more complete discussion, visit the U.S. EPA's arsenic Web site at www.epa.gov/safewater/arsenic.html.